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ABSTRACT

An evaluation determined the outcome and impact of the project "A Career Education Program for the Gifted and Talented in Rural Colorado" conducted by the South Central BOCES (Board of Cooperative Education Services) during 1979-80 in Pueblo, Colorado. (A project report is available separately--see Note.) Two evaluation instruments were administered to six students from rural-setting high schools involved in the project and a control group. The Rural Internship Program Student Assessment Instrument measured three aspects of career development: checklist (preparation in career skills), opinions about work, and occupational information (concerning career decision making). The Applicant Interview form contained items related to career development, work, and communication in careers. Results showed that students involved in the project scored higher on both instruments, indicating better preparation for accomplishment of tasks related to life and career skills. The project students also had positive, high opinions regarding work and how to approach a work setting. The most significant differences related to information about careers. Project students were aware of more sources of information and factors to consider in making career choices and were more advanced in their career planning and pursuits. (The evaluation instruments are appended.) (YLB)

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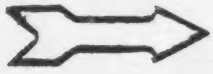
A CAREER EDUCATION PROGRAM FOR THE GIFTED AND TALENTED IN RURAL COLORADO



Project Number 13.544

Directed by Kaye Hamm

South Central BOCES, Pueblo, Colorado

{Rural Internship Program.}

Project Outcome Evaluation
Conducted January, 1980

by

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U.S. DEPARTMENT OF HEALTH
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INTRODUCTION

It is the purpose and intent of this evaluation to determine the outcome and impact of the project "A Career Education Program for the Gifted and Talented in Rural Colorado" conducted by the South Central BOCES in Pueblo, Colorado.

Described in this evaluation report are evaluation design, limitations, population, instrumentation, procedures, results, findings, and recommendations.

The evaluation is not intended to be a process evaluation, but has rather accepted other reports of the process and serves as a documentation of the results of the process.

In evaluating the student outcomes, the three general objectives found on page 37 of the project proposal are used as a basis.

During the time spent in this program, the student will demonstrate:

a. good work habits

b. personal career growth

c. improved communication skills

EVALUATION DESIGN

This evaluation was conducted a posteriori; therefore, there are serious limitations on appropriate evaluation design and data treatment. The size of the treatment population also provides additional limitations on design and treatment since there were only six students involved in the project at the time of evaluation.

With the preceding limitations, the evaluator decided to use an evaluation design which would include posttesting the project students and administering the same instruments to a control group.

It is recognized that this design may not account for variables existing at the beginning of the treatment, but without base data this design is the most feasible.

LIMITATIONS

The following are limitations with which this evaluation was conducted:

1. The treatment group is limited to students completing "A Career Education Program for the Gifted and Talented in Rural Colorado" during the school year 1979-1980.
2. The evaluation is limited to results of the project in student outcomes and does not address the process used in reaching those outcomes.
3. The evaluation is limited to outcomes expressed or implied in the objectives statement of the project proposal.

POPULATIONS

Treatment Group

The treatment group includes all students who completed the program "A Career Education Program for the Gifted and Talented in Rural Colorado" during the 1979-1980 school year. This group consists of six students from rural setting high schools in the geographic area of the South Central BOCES.

Control Group

The control group for this evaluation was selected at random from school rosters in rural high schools in Colorado. As much as possible the same demographic characteristics existed with the control group as the treatment group.

INSTRUMENTATION

Two instruments were developed for this evaluation (see Appendix). They were both modifications of instruments developed by the evaluator for use in evaluating experience-based career education programs. Both instruments have been tested for reliability and validity and were found to be acceptable for the purpose of this evaluation.

The Rural Internship Program Student Assessment Instrument consists of three parts, each intended to measure different aspects of career development.

Part I is the "Experience Checklist." This part contains 20 items each relating to students' preparation in career skills. Students are instructed to respond how well prepared they are to accomplish tasks stated. Responses are Very Well, Somewhat, Slightly, Not At All.

Part II is "Opinions About Work." This part contains 15 attitudinal items concerning work and career development. A five-point likert-type scale is used in which students respond Strongly Agree, Agree, Not Sure, Disagree, and Strongly Disagree. For analysis, the Not Sure response is eliminated, and it is treated as a four-point scale.

Part III is "Occupational Information." This part contains two items with ten possible open-ended responses for each item. The item relates to sources of information and factors in career decision making.

The second instrument is the "Applicant Interview Form." This instrument is administered by a trained interviewer and contains 18 items related to career development, work and communication in careers.

The instrument has been used successfully with over 200 high school students and has been found to have a reliability of using the split-half test.

PROCEDURES

The following is a description of the procedures used in conducting this evaluation by major phases.

1. **Development of an Evaluation Plan.**

   The project director and evaluator met and reviewed the project objectives, progress and needs for evaluation. The project evaluator then developed the evaluation design and submitted it to the project director for approval.

2. **Instrument Development.**

   Based upon the project objectives and evaluation needs, the project evaluator reviewed existing instruments which might be applicable to this project. It was decided that with modification two instruments developed by the evaluator for Experience-Based Career Education could be used in this project. The two instruments were modified by the evaluator and submitted to the project director.

   The instruments were then submitted to a panel of experts to verify content validity. A pilot test of the instruments was conducted to determine reliability. The split-half test was applied to the pilot test data to determine reliability.

3. **Administration of Instruments.**

Instruments were administered to all test groups within a two-week period. The Rural Internship Program Student Assessment was administered by the project director in a group setting to all participants.

The Applicant Interview Form was administered by a trained interviewer to both the project and control groups. Interviews were conducted individually based upon a schedule developed by the project director.

4. **Analysis of the Data**

After the data was gathered it was tabulated and analyzed. Frequency distributions were calculated for each group and instrument. Comparison of groups was accomplished by t-tests to determine if a significant difference existed between groups. The Rural Internship Program Student Assessment was analyzed by part and total. The Applicant Interview Form was analyzed only as a total instrument.

INSTRUMENT EVALUATION

Results of the Rural Internship Program Student Assessment are here reported by part.

In Part 1 the experience checklist was utilized to determine skills and skill levels related to preparation for life and work. Mean scores and frequencies are shown in Table 1.

TABLE 1. Frequency and Mean Responses to Experience Checklist by Percentage.

Item	Percentage				Mean
	Very Well	Somewhat	Slightly	Not At All	
1. Solve problems through a logical process.....	16	83	0	6	1.83
2. Participate in activities to learn more about myself.....	50	50	0	0	1.5
3. Work with others on cooperative projects.....	50	50	0	0	1.5
4. Review my interests and abilities related to career choices.....	83	16	0	0	1.17
5. Understand how the government and the economy affect the world of work.....	67	33	0	0	1.33
6. Understand what to look at when considering a job.....	67	33	0	0	1.33
7. Principles in finding and keeping a job.....	83	16	0	0	1.17
8. Apply basic skills in solving problems around me.....	33	67	0	0	1.67
9. Use a number of different resources in gathering information about work and decision making.....	50	33	16	0	1.66
10. Communicate comfortably with others.....	67	33	0	0	1.33
11. Take the responsibility for my actions.....	83	16	0	0	1.17
12. Make adjustments in my plans as a result of changing situations.....	50	50	0	0	1.5
13. Plan a budget.....	50	16	33	0	1.83
14. Interview adults in the community.....	50	50	0	0	1.5
15. Understand how business operates in a free enterprise system.....	33	50	16	0	1.83
16. Complete a job application.....	83	16	0	0	1.17
17. Apply the principle of "career ladder" to various occupations....	50	33	0	16	1.83
18. Manage finances.....	33	33	33	0	2.0
19. Develop a community profile.....	16	67	16	0	2.0
20. Participate in community organizations and government.....	33	33	33	0	2.0

Table 2 contains the frequency and mean responses to Part 2 "Opinions About Work." It is significant to note the variation found in items 10, 13, 14, 15.

Part 3 of the Rural Internship Program Student Assessment contained two items. Item one asked students to list sources of information about work. The mean number of correct responses for the project group was six with a range of 2-9. The second item asked students to list factors to consider when choosing an occupation. The mean number of correct responses to this item was 5.16 with a range of 3.10.

The "Applicant Interview Form" was tabulated as a total. The mean score for project students was 74.33 with a standard deviation of 8.07 and a range of 58-79.

RESULTS OF TOTAL PROGRAM

To determine the results of the Career Education Program for the Gifted and Talented in Rural Colorado, findings from data gathered on the two instruments from project students was compared with data gathered from a control group of students on the same instruments.

In comparing data on part one of the student assessment, the mean score for the control group was 44.45 and the mean score for the project group was 31.33. In this part of the assessment a lower score indicates a higher level of preparation. When the t-test was applied to the data a significant difference was found at the .05 level of confidence.

TABLE 2. Frequency and Mean Responses to "Opinions About Work."

Item	Percentage					Mean
	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	
1. The classes taken in high school have little effect on occupations you may choose.....	16	16	0	67	0	2.5
2. An economic recession affects some occupations more than others.....	16	83	0	0	0	1.83
3. Most people select an occupation and remain in it their working years.....	0	67	16	16	0	2.2
4. Childhood experiences seldom effect our career choices.....	0	0	0	67	33	3.33
5. Every job has some activities that are boring.....	16	67	0	16	0	2.0
6. Most occupations require a college degree.....	0	0	16	83	0	3.0
7. The amount of time you have for leisure is seldom affected by your occupation.....	0	0	16	67	16	3.2
8. Every occupation has disadvantages	16	50	33	0	0	1,75
9. The number of new occupations is decreasing because of technology..	0	0	16	50	33	3.4
10. The number of available jobs is decreasing.....	0	33	0	33	33	3.0
11. Few people could be successful in more than one occupation.....	0	16	16	50	16	3.0
12. Your hobbies could have an effect on your occupational choice.....	33	66	0	0	0	1.75
13. In applying for a job it is best to begin by talking with the personnel director.....	0	33	33	16	16	2.75
14. Most people enter their occupation through career planning.....	16	33	33	16	0	2.0
15. Gathering information about occupations is more valuable than experiences when making an occupational choice.....	16	16	16	33	16	2.6

From this analysis it was found that students involved in the project achieved a higher level of preparation to accomplish tasks listed on the experience checklist than did the control group of students.

The data from part two of the student assessment, "Opinions About Work," was not comparatively analyzed. In this part, data was reordered to reflect an opinion score for the total. A score of 15-30 reflects a high opinion, 30-45 reflects a moderately positive opinion, and scores above 45 reflect a negative opinion. The mean score for the project students was 21.23 and for the control group 23.72. While there was little difference in the two groups, they both reflect a high opinion regarding work.

Part three of the student assessment related to information about occupations. This part was divided into the two items which were analyzed separately. The mean score for the project group on item one, sources of occupational information, was 6.0 and for the control group the mean score was 4.47. When the t-test was applied, a significant difference was found at the .05 level of confidence.

It may, therefore, be concluded that the project students are more aware of sources of occupational information.

The second item in part three related to factors to consider in selecting an occupation. The mean score for the project group was 5.16 and for the control group the mean score was 3.47. When the t-test was applied, a significant difference was found at the .05 level of confidence. It can be concluded from this data that the project students are more aware of factors to consider in choosing an occupation than the control group.

The greatest difference in all data was found in the scores on the "Applicant Interview Form." The mean score for the project group was 74.33 with a standard deviation of 8.07 and the mean score for the control group was 61.71 with a standard deviation of 11.03. When the t-test was applied to this data, a significant difference was found at the .05 level of confidence.

From this analysis it was concluded that not only were the project students more knowledgeable, but also they were better able to communicate this knowledge.

CONCLUSIONS AND RECOMMENDATIONS

Based upon the results of this evaluation, it is concluded that the "Career Education Program for the Gifted and Talented in Rural Colorado" has resulted in significantly higher scores on the two instruments used than a control group of similar students in similar settings.

It was concluded that students involved in the project at its completion were significantly better prepared to accomplish tasks related to life and career skills. This accomplishment may well be a result of the experiential nature of this project. However, a more complete evaluation would be necessary to attribute these results directly to project experiences.

It was further concluded that students involved in the project have positive, high opinions regarding work and how to approach a work setting.

The most significant differences found in this evaluation relate to information about occupations. Students completing the project are aware of more sources of information and factors to consider in making career choices.

Utilizing the applicant interview, it was found that project students are significantly better prepared to make career choices and understand good work habits than the control group students. They were also better able to communicate regarding their careers than were the control group of similar students.

In conclusion, it was found through this evaluation that the student outcomes or product of this project are significantly more advanced in their career planning and pursuits than a control group of students.

This evaluator recommends further efforts in expanding the project based upon the evaluation results. An extended evaluation over time is also recommended to determine the longitudinal effects of the project on students' career development.

APPENDIX

APPLICANT INTERVIEW FORM

Student's Name_____Interviewer's Name_____

School_____Date_____

Age of Student_____Grade in School_____

1. What is your career area of interest?_____ ☐

States specific job ___(5)
States general area ___(3)
States 2 areas ___(2)
States 3 or more ___(1)
Doesn't Know ___(0)

2. What interests and abilities do you have that make you think you will be successful as a ___(career interest)? (What do you know about yourself that . . ?) /If no career interest was given in question one then ask the student to explain an area that he/she is interested in and to tell why he/she is interested in that particular area./

(4-5)	(2-3)	(0-1) ☐
Able to assess own interests and relate it to an occupational area.	Some awareness of interests--doesn't relate them well to an occupational area.	Difficulty in knowing or relating own interests--unable to relate to occupational area.

3. What are some experiences you've had in your area of interest? Tell me about several of them.

(4-5)	(2-3)	(0-1) ☐
Indicated at least three learning experiences.	Indicated two learning experiences	Could only relate one or no experiences.

4. What particular skills or attributes do you feel are necessary to succeed in___(stated career area)?

Which of these skills or attributes do you feel you already have?

Which of these skills or attributes do you feel you still need to acquire?

(4-5)	(2-3)	(1)	(0) ☐
Knows most of skills that are necessary and those he/she presently has or will need to acquire.	Knows a few of the skills that are necessary and those he/she presently has or will need to acquire.	Little or no knowledge of necessary skills but recognizes need for further information.	Little or no knowledge of necessary skills but feels ready to survive.

5. How much have you looked into (explored) this particular career? i.e. What about the future outlook for this occupation?

(4-5)	(2-3)	(0-1)	
Appears to have explored and thought quite extensively about this career.	Has placed some effort into learning more about this career.	Shows little or no actual exploration of this career.	☐

6. Tell me about some experiences you've had this year that have been helpful to you in learning more about yourself and your career?

(5)	(4)	(2-3)	(0)	
Able to relate an experience--shows self understanding	Able to relate an experience--some difficulty relating to self development.	Difficulty in relating an experience.	Unable to relate an experience.	☐

7. If you were seeking employment in ___(your stated career area), what procedures would you follow? Where would you begin after you'd gotten your education, if applicable?--Tell me everything you would do until you were finally hired.

(3-5)	(1-2)	(0-1)	
Understands job-hunting process; importance of want-ads, contacts, applications, interview, appearance. Indicates desire to follow correct procedures.	Understands most aspects of the process. Does not indicate necessity for proper use of each step.	Lack of understanding and need for these skills.	☐

8. Do you have a Social Security card? ___YES(1) ___NO(0) ☐☐
Why do you need one? (0-1)

9. Assume you are at a job site working in your area of interest. After a couple of weeks the foreman begins to act antagonistic towards you, finally telling you that he/she feels that because you are so young it's causing problems (of resentment, etc.) with some of the older emplyees. How would you handle this situation?

(5)	(4)	(2-3)	(0-1)	
Open to finding out what's causing the problem; common-sense approach. Career achievement and desire to maintain job evident.	Shows some intent to determine real cause of problem--willing to remain with job.	Undecided about how to handle the situation.	Indicates desire to quit immediately; no attempt to resolve; lacks job commitment.	☐

10. Which would you rather have as a boss?

(0) man	(0) woman	(1) It doesn't matter	☐

For the following jobs, which would make the best employee?

	(0) man	(0) woman	(1) doesn't matter	
Secretary	___	___	___	
Carpenter	___	___	___	
Company President	___	___	___	
Farmer	___	___	___	
Nurse	___	___	___	Total Points ☐

11. Since our company is interested in your welfare and happiness, if we were to transfer you to a new community to work:

a. Tell me about 2-3 activities in which you would try to get involved ___(0-3)
b. How would you find out about these things? ___(0-1)
(Has learned to utilize community resources)
c. How would you actually get involved? ___(0-1)
(Shows ability to get involved)

Total Points ☐

12. We are concerned with your ability to function in the community. Assume you were to be taken out of your family situation right now and placed in a house to live on your own--what kinds of things have you learned <u>this year</u> that would help you survive on your own? (life skills)

(4-5)	(2-3)	(1-2)	(0)	
Readily able to relate 2-3 experiences.	Indicated 2-3 experiences with some difficulty.	Could relate only one experience.	None.	☐

13. We're concerned that our employees understand money management. How do you set up a budget? (*Factors that determine need, categories, setting priorities, inflation as a budget problem, etc.*)

Do you use a budget or do you plan to budget when you get a job?

(4-5)	(1-3)	(0)	
Understands importance of budgeting and regularly practices it or shows intent to practice budgeting.	Doesn't fully understand purpose and need for budgeting.	Lack of understanding of budget process.	☐

14. If you were purchasing for our firm (or an item for yourself), what are some things you would consider?

(2-3)	(1)	(0)	
Understands need to check variety of sources, compare.	Doesn't fully understand buying process.	Lack of understanding of buying process.	☐

15. Where could you go or what could you do after purchasing an item if you had a problem with it--such as a defect?

(3-4)	(2)	(1)	(0) ☐
Knows specifically where to go for help in solving consumer problems. (Manager, complaint dept., Better Business Bureau, Consumer Protection Laws, etc.)	Has general knowledge of how to deal with consumer complaint (Mentions one source).	Has vague knowledge (simply says, "Take it back," and does not really know what to do after that.	Lack of knowledge.

16. I'd now like to ask you a few questions about some personal responsibilities.

a. Do you know how to file your own income tax? ___YES(1) ___NO (0)
b. Where can you get a tax form? ___ (1) ___ (0)
c. Does everyone in the U.S. pay the same rate or percentage of their income in taxes? ___YES(0) ___NO (1)

Total Points ☐

17. What kinds of services do your property taxes pay for?
/Award points according to number of valid services mentioned such as schools, streets, parks, municipal services, etc. (0-5 pts.) ☐

18. Suppose you were to hear that the U.S. House of Representatives were about to vote on a bill that would force all people employed in your area to have to adhere to some strict safety standard that you felt was not important. You are against this bill.

What can you do about it?
Who should you contact?

(4-5)	(2-3)	(1)	(0) ☐
Knows to write, telegram, petition, or contact a U.S. Congressman or Representative.	Has some knowledge of what to do (lists one of the sources); Knows to contact some governmental agency or person.	Has limited knowledge, Can barely answer one of the two questions.	Lack of knowledge.

RURAL INTERNSHIP PROGRAM

Student Assessment

The purpose of this assessment is to provide basic information for programs. Your response will be confidential and used only to determine program effect.

It is important you give us the most correct information possible.

Thank you for your cooperation and assistance.

Prepared by

Glen D. Rask

PART I - EXPERIENCE CHECKLIST

In Part I indicate by circling the number on the right how well prepared you think you are to accomplish the tasks stated: (1) Very well prepared, (2) Somewhat prepared, (3) Slightly prepared, or (4) Not at all prepared.

	Very Well	Somewhat	Slightly	Not At All
1. Solve problems through a logical process.....	1	2	3	4
2. Participate in activities to learn more about myself.....	1	2	3	4
3. Work with others on cooperative projects.....	1	2	3	4
4. Review my interests and abilities related to career choices.....	1	2	3	4
5. Understand how the government and the economy affect the world of work.....	1	2	3	4
6. Understand what to look at when considering a job.....	1	2	3	4
7. Principles in finding and keeping a job.....	1	2	3	4
8. Apply basic skills in solving problems around me.....	1	2	3	4
9. Use a number of different resources in gathering information about work and decision making.	1	2	3	4
10. Communicate comfortably with adults.....	1	2	3	4
11. Take the responsibility for my actions.....	1	2	3	4
12. Make adjustments in my plans as a result of changing situations.....	1	2	3	4
13. Plan a budget.....	1	2	3	4
14. Interview adults in the community.....	1	2	3	4
15. Understand how business operates in a free enterprise system.....	1	2	3	4
16. Complete a job application.....	1	2	3	4
17. Apply the principle of "career ladder" to various occupations.....	1	2	3	4
18. Manage finances.....	1	2	3	4
19. Develop a community profile.....	1	2	3	4
20. Participate in community organizations and government.....	1	2	3	4

PART II - OPINIONS ABOUT WORK

This part asks your opinion about issues related to work. For each statement on the left, circle the response on the right that reflects your opinion.
(1) Strongly Agree, (2) Agree, (3) Not Sure, (4) Disagree, (5) Strongly Disagree

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
1. The classes taken in high school have little effect on occupations you may choose.....	1	2	3	4	5
2. An economic recession affects some occupations more than others.....	1	2	3	4	5
3. Most people select an occupation and remain in it their working years.....	1	2	3	4	5
4. Childhood experiences seldom effect our career choices.....	1	2	3	4	5
5. Every job has some activities that are boring.....	1	2	3	4	5
6. Most occupations require a college degree...	1	2	3	4	5
7. The amount of time you have for leisure is seldom affected by your occupation.....	1	2	3	4	5
8. Every occupation has disadvantages.....	1	2	3	4	5
9. The number of new occupations is decreasing because of technology.....	1	2	3	4	5
10. The number of available jobs is decreasing..	1	2	3	4	5
11. Few people could be successful in more than one occupation.....	1	2	3	4	5
12. Your hobbies could have an effect on your occupational choice.....	1	2	3	4	5
13. In applying for a job it is best to begin by talking with the personnel director.....	1	2	3	4	5
14. Most people enter their occupation through career planning.....	1	2	3	4	5
15. Gathering information about occupations is more valuable than experiences when making an occupational choice.....	1	2	3	4	5

PART III - OCCUPATIONAL INFORMATION

The purpose of Part III is to determine your occupational information and experience. Complete as many items as you can.

1. List sources (people and things) that you could use to answer questions about occupations.

1. _____	6. _____
2. _____	7. _____
3. _____	8. _____
4. _____	9. _____
5. _____	10. _____

2. List factors you believe one should consider in choosing an occupation.

1. _____	6. _____
2. _____	7. _____
3. _____	8. _____
4. _____	9. _____
5. _____	10. _____